which effects reduction of the particular condition, or retards its expansion. When ${\tt co-administering}$ the compounds of

the invention to block retinoid-induced toxicity or side effects, the antagonist and/or inverse agonist compounds of the. . .

ACCESSION NUMBER: 2001:22395 USPATFULL

TITLE: Substituted diaryl or diheteroaryl methanes, ethers

and

amines having retinoid agonist, antagonist or inverse

agonist type biological

INVENTOR(S): Song, Tae K., 3768 N. Country Club Dr., Long Beach,

CA,

United States 90807

Teng, Min, 2 Dove St., Aliso Viejo, CA, United States

92656

Chandraratna, Roshantha A., 25841 Empresa, Mission

Viejo, CA, United States 92691

NUMBER DATE

PATENT INFORMATION: US 6187950 20010213 APPLICATION INFO.: US 1999-267992 19990312 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1997-840040, filed on 24 Apr

1997, now patented, Pat. No. US 5919970

DOCUMENT TYPE: Utility

PRIMARY EXAMINER: Raymond, Richard L.

LEGAL REPRESENTATIVE: Szekeres, Gabor L.; Baran, Robert J.; Voet, mARTIN A.

NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 2502

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

CLM What is claimed is:

1. A compound of the formula ##STR13## where R.sub.4 is H or F; R.sub.2 is fluoro-substituted alkyl of 1 to 6 carbons, NO.sub.2, NH.sub.2, COOC.sub.1-6 alkyl, N.sub.3 or I; R.sub.4 * is H, F, NO.sub.2 or NH.sub.2; Z is --C.tbd.C--, --CH.dbd.CH

```
1996:745366 CAPLUS
AN
     126:14397
DN
ΤI
     Sequential antibiotic therapy for acne
     promotes the carriage of resistant staphylococci on the skin of contacts
ΑU
     Miller, Yvonne W.; Eady, E. Anne; Lacey, Richard W.; Cove, Jonathan H.;
     Joanes, Derrick N.; Cunliffe, William J.
CS
     Department Microbiology, University Leeds, Leeds, LS2 9JT, UK
SO
     J. Antimicrob. Chemother. (1996), 38(5), 829-837
     CODEN: JACHDX; ISSN: 0305-7453
PB
     Saunders
DT
     Journal
LA
     English
CC
     1-5 (Pharmacology)
AB
     The selection of a predominantly resistant staphylococcal skin flora in
     acne patients during antibiotic treatment has been
     extensively documented. This study sought to det. whether antibiotic
     therapy for acne had any effect on skin carriage of
     resistant coagulase-neg. staphylococci (CNS) by close contacts of treated
     patients. Bacterial samples were obtained using a scrub wash technique
     from facial skin of 41 contacts (parents, siblings or partners) of
     patients who had been treated with at least three different antibiotics
     over a min. period of 2 yr. Samples were also obtained from 41 control
     subjects who had no known contact with any antibiotic treated acne
     patient. None of the contacts or controls had received any antibiotic
     therapy in the preceding two years. The no., percentage and
     prevalence of CNS resistant to each of seven antibiotics was estd. by
     plating serial ten-fold dilns. of wash fluid directly onto
     antibiotic-contg. and antibiotic-free medium. Significantly more
contacts
     than controls carried strains resistant to erythromycin, clindamycin,
     fusidic acid, trimethoprim and chloramphenicol as well as more multiply
     resistant strains (P < 0.05, .chi.2). The no. and percentage of
     staphylococci resistant to tetracycline, erythromycin, clindamycin,
     fusidic acid and chloramphenical were also significantly raised (P <
0.05.
     Mann-Whitney U-test) in contacts. Only aminoglycoside resistance was not
     increased by any of the above criteria. These observations provide
     evidence that sequential antibiotic therapy for
     acne exerts selective pressure for increased skin carriage of
     resistant CNS not only in patients but also in their close contacts.
ST
    antibiotic staphylococci drug resistance
IT
    Antibiotics
    Drug resistance
     Staphylococcus
        (sequential antibiotic therapy for acne
       promotes the carriage of resistant staphylococci on the skin of
       contacts in humans)
IT
     60-54-8, Tetracycline
                             79-57-2, Oxytetracycline
                                                        114-07-8, Erythromycin
     564-25-0, Doxycycline
                            738-70-5, Trimethoprim
                                                      10118-90-8, Minocycline
    RL: BAC (Biological activity or effector, except adverse); THU
```

(Therapeutic use); BIOL (Biological study); USES (Uses)

promotes the carriage of resistant staphylococci on the skin of

(sequential antibiotic therapy for acne

contacts in humans)

ANSWER 2 OF 12 CAPLUS COPYRIGHT 2001 ACS

L17

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ANSWER 20 OF 23 CAPLUS COPYRIGHT 2001 ACS
     Treatment of inflammatory dermatoses with corticosteroids and
     retinoids
AΒ
     Inflammatory dermatoses (e.g. acne, lichen planus, mycosis
     fungoides, acute drug reactions, but not psoriasis) are controlled and
     cleared by topical application to the affected area of a synergistic
     combination of a corticosteroid and a retinoid. Thus, chronic
     atopic dermatitis was treated twice daily with a cream contg. 0.025 or
     0.05% tretinoin and 2.0% hydrocortisone; the.
     dermatitis treatment corticosteroid retinoid
ST
ΙT
     Allergy inhibitors
         (corticosteroid-retinoid combinations, contact dermatitis and
        dermatitis from drug hypersensitivity treatment with)
IT
     Inflammation inhibitors
        (corticosteroid-retinoid combinations, dermatitis treatment
        with)
ΙT
     Pharmaceuticals
        (hypersensitivity to, dermatitis from, treatment of, with
        corticosteroid-retinoid combination)
ΙT
     Retinoids
     RL: BIOL (Biological study)
        (mixts. with corticosteroids, dermatitis treatment with)
IT
     Corticosteroids, biological studies
     RL: BIOL (Biological study)
        (mixts. with retinoids, dermatitis treatment with)
IT
     Acne
     Dermatitis
        (treatment of, with corticosteroid-retinoid
        combination)
IT
     Alopecia
        (areata, treatment of, with corticosteroid-retinoid
        combination)
ΙT
     Lupus erythematosus
        (discoid, treatment of, with corticosteroid-retinoid
        combination)
ΙT
     Keratosis
        (follicularis, treatment of, with corticosteroid-
        retinoid combination)
IT
     Skin, disease
        (lichen planus, treatment of, with corticosteroid-
        retinoid combination)
ΙT
     Skin, neoplasm
        (mycosis fungoides, treatment of, with corticosteroid-
        retinoid combination)
IT
     Skin, disease
        (pseudofolliculitis barbae, treatment of, with
        corticosteroid-retinoid combination)
TΤ
     68-26-8D, Retinol, mixts. with corticosteroids
                                                      76-25-5D, Triamcinolone
     acetonide, mixts. with retinoids
                                        79-81-2D, Retinyl palmitate,
    mixts. with corticosteroids
                                  116-31-4D, Retinal, mixts. with
                       302-79-4D, all-trans-Retinoic acid, mixts. with
    corticosteroids
    corticosteroids
                       401-10-5D, Retinoyl .beta.-glucuronide, mixts. with
    corticosteroids
                       2152-44-5D, Betamethasone valerate, mixts. with
                 4759-48-2D, 13-cis-Retinoic acid, mixts. with
    retinoids
    corticosteroids
                       5300-03-8D, 9-cis-Retinoic acid, mixts. with
                       7069-42-3D, Retinyl propionate, mixts. with
    corticosteroids
                       25122-46-7D, Clobetasol propionate, mixts. with
    corticosteroids
                 51077-50-0D, mixts. with corticosteroids
    54350-48-0D, mixts. with corticosteroids 55079-83-9D, mixts. with
```

corticosteroids 56281-36-8D, mixts. with corticosteroids 11-cis-Retinoic acid, mixts. with corticosteroids 69251-08-7D, mixts. with corticosteroids 71441-28-6D, mixts. with corticosteroids 75078-91-0D, mixts. with corticosteroids 75664-66-3D, mixts. with 78548-88-6D, mixts. with corticosteroids corticosteroids 79073-30-6D. mixts. with corticosteroids 79073-31-7D, mixts. with corticosteroids 83860-24-6D, mixts. with corticosteroids 86471-13-8D, mixts. with corticosteroids 86471-16-1D, mixts. with corticosteroids 87719-32-2D, mixts. with corticosteroids 91587-01-8D, mixts. with corticosteroids 94497-51-5D, mixts. with corticosteroids 102121-60-8D, mixts. with 103810-85-1D, 4-Acetamidophenyl retinoate, mixts. with corticosteroids 104458-65-3D, mixts. with corticosteroids corticosteroids 104561-36-6D, mixts. with corticosteroids 104561-41-3D, mixts. with corticosteroids 106685-40-9D, mixts. with corticosteroids 131331-37-8D, mixts. with corticosteroids 133207-56-4D, mixts. with 150406-02-3D, mixts. with corticosteroids corticosteroids RL: BIOL (Biological study)

	(dermatitis treatment with)								
	PATENT NO.			KIND DATE		APPLICATION NO.		DATE	
ΡI	MO	9315740		A1	19930819		WO 1993-US1043	19930129	
		W: AU,	CA,	CZ, FI	, JP, KR,	NO,	NZ		
		RW: AT,	BE,	CH, DE	, DK, ES,	FR,	GB, GR, IE, IT, LU,	MC, NL, PT, SE	
	ΑU	9335854			19930903		AU 1993-35854		
	ΑU	667519			19960328				
	ΕP	625045		A1	19941123		EP 1993-904929	19930129	
		R: AT,	BE,	CH, DE	, DK, ES,	FR,	GB, GR, IE, IT, LI,	LU, MC, NL, PT,	
SE								, , , , , , , , , , , , , , , , , , , ,	
	JP	07505617		Т2	19950622		JP 1993-514192	19930129	
	JP	2927961		B2	19990728				
	ZΑ	9300811		Α	19930910		ZA 1993-811	19930205	
	US	5998395		Α	19991207		US 1993-119510	19930910	
	FI	9403625		Α	19940804		FI 1994-3625	19940804	
	NO	9402913		Α	19941005		NO 1994-2913	19940805	

```
ΤI
     Combination method for acne treatment
     Described is a combination method using selective inhibitors of
AB
     5.alpha.-reductase 1 and/or 2 including 7.beta.-substituted
     3-aza-5.alpha.-cholestan-3-ones and related
4-aza-5.alpha.-androstan-3-one
     compds. which are useful in the treatment of acne
     vulgaris in combination with a retinoid, e.g.,
     tretinoin or isotretinoin, and at least one agent selected from an
     antibacterial, keratolytic, and/or an anti-inflammatory (no data). The.
ST
     acne treatment azacholestanone azaandrostanone prepn; reductase
     inhibitor azacholestanone azaandrostanone prepn
TΤ
        (prepn. of azacholestanones and azaandrostanones as reductase
        inhibitors in acne treatment)
     PATENT NO.
                      KIND DATE
                                           APPLICATION NO.
                      ____
PΙ
     WO 9612487
                      A1
                            19960502
                                           WO 1995-US13305 19951017
         W: AL, AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP,
             KG, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO,
             RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ
         RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
             LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
             SN, TD, TG
     CA 2199979
                            19960502
                       AΑ
                                           CA 1995-2199979 19951017
     AU 9538336
                       Α1
                            19960515
                                           AU 1995-38336
                                                            19951017
     AU 694576
                       B2
                            19980723
     EP 786999
                       A1
                            19970806
                                           EP 1995-936349
                                                            19951017
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE
     JP 10508586
                       T2
                            19980815
                                           JP 1996-514031
                                                            19951017
L20
    ANSWER 17 OF 23 CAPLUS COPYRIGHT 2001 ACS
AB
    Minocycline, a semisynthetic deriv. of tetracycline, has become
     a commonly prescribed medication for the treatment of persistent
           It has been assocd. with a variety of adverse reactions,
     including one published case of serum sickness. We describe two.
     sickness reactions due to minocycline, characterized by erythematous
rash,
     arthropathy, and in one case, angioedema. Both patients recovered fully
     after treatment with an antihistamine in combination
    with a brief course of corticosteroids. Although these represent only
the
    second and third cases in the literature of minocycline-induced. . .
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ANSWER 16 OF 23 CAPLUS COPYRIGHT 2001 ACS

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L20 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2001 ACS
ΤI
     Skin care compositions containing naringenin and/or quercetin and a
     retinoid
AΒ
     Quercetin and/or naringenin (I) in combination with either
     retinol (II) or retinyl ester resulted in a synergistic inhibition of
     keratinocyte differentiation. The effects of the retinol or retinyl
     esters in combination with naringenin and/or quercetin were
     analogous to treatment with retinoic acid. Commination of
     2.5x10-9 M II and 10-9 M I inhibited keratinocyte differentiation by 53%.
     A cosmetic emulsion.
ST
     skin keratinocyte differentiation naringenin quercetin retinoid;
     cosmetic emulsion naringenin retinol
ΙT
     Skin aging
        (disorder, photoaging; skin care compns. contg. naringenin and/or
        quercetin and retinoid)
ΙT
     Skin diseases
        (dry skin; skin care compns. contg. naringenin and/or quercetin and
        retinoid)
ΙT
     Skin diseases
        (photoaging; skin care compns. contg. naringenin and/or quercetin and
        retinoid)
TΤ
     Acne
     Atopic dermatitis
     Cell differentiation
     Cosmetic emulsions
     Keratinocyte
     Lotions (cosmetics)
     Sebum
     Sunscreens
        (skin care compns. contg. naringenin and/or quercetin and
        retinoid)
     Retinoids
     RL: BAC (Biological activity or effector, except adverse); BUU
(Biological
     use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (skin care compns. contg. naringenin and/or quercetin and
        retinoid)
IT
     Flavonoids
     RL: BAC (Biological activity or effector, except adverse); THU
     (Therapeutic use); BIOL (Biological study); USES (Uses)
        (skin care compns. contg. naringenin and/or quercetin and
        retinoid)
TΤ
     Cosmetics
        (wrinkle-preventing; skin care compns. contg. naringenin and/or
        quercetin and retinoid)
     68-26-8, Retinol
IT
                        79-81-2, Retinyl palmitate
                                                     117-39-5, Quercetin
     480-41-1, Naringenin
                           7069-42-3, Retinyl propionate
     RL: BAC (Biological activity or effector, except adverse); BUU
(Biological
    use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (skin care compns. contg. naringenin and/or quercetin and
        retinoid)
IT
    127-47-9, Retinyl acetate
                                302-79-4, Retinoic acid
    RL: BAC (Biological activity or effector, except adverse); THU
     (Therapeutic use); BIOL (Biological study); USES (Uses)
        (skin care compns. contg. naringenin and/or quercetin and
       retinoid)
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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 5665367	A	19970909	US 1996-722540	19960927

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L20 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2001 ACS
     Serine proteinase and topical retinoid compns. for treatment of
TТ
     acne and inhibition of skin aging
     This invention is related to methods for treating Acne Vulgaris
AB
     and/or for producing anti-aging effects on the skin of a mammal, and
     compns. effective for the same. More specifically, . . . invention is
     directed to the use of serine proteases, as the sole active agent in a
     compn. effective for the treatment of Acne Vulgaris
     and/or for producing anti-aging effects on the skin of a mammal, or in
     combination with a retinoid compd. in a compn. effective
     for the same.
ST
     serine proteinase topical retinoid formulation acne;
     antiaging skin serine proteinase retinoid formulation
ΙT
        (Rhino mouse; serine proteinase and topical retinoid compns.
        for treatment of acne and inhibition of skin aging)
IT
        (adjuvants; serine proteinase and topical retinoid compns.
        for treatment of acne and inhibition of skin aging)
IT
     Apoptosis
        (inhibition of; serine proteinase and topical retinoid
        compns. for treatment of acne and inhibition of skin aging)
     Liposomes (drug delivery systems)
TΨ
        (nonionic; serine proteinase and topical retinoid compns. for
        treatment of acne and inhibition of skin aging)
ΙT
     Aging (animal)
     Antioxidants (pharmaceutical)
     Buffers
     Coloring materials
     Foaming agents
     Humectants
     Moisturizers (cosmetics)
     Perfumes
     Preservatives
     Skin conditioners
     Sunscreens
     Surfactants
     Thickening agents
     Topical drug delivery systems
        (serine proteinase and topical retinoid compns. for treatment
        of acne and inhibition of skin aging)
ΙŢ
    Retinoids
    RL: BAC (Biological activity or effector, except adverse); BUU
(Biological
     use, unclassified); PEP (Physical, engineering or chemical process); THU
     (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
        (serine proteinase and topical retinoid compns. for treatment
       of acne and inhibition of skin aging)
IT
    Hair follicle
        (trypsin delivery into; serine proteinase and topical retinoid
       compns. for treatment of acne and inhibition of skin aging)
IT
        (vulgaris; serine proteinase and topical retinoid compns. for
       treatment of acne and inhibition of skin aging)
IT
     68-26-8, Vitamin a alcohol
                                79-81-2, Retinyl palmitate
    Retinal
              127-47-9, Retinyl acetate
                                           302-79-4, Retinoic acid
9001-92-7,
    Proteinase
                  9002-07-7, Trypsin
                                       9014-01-1, Subtilisin
                                                               9046-67-7,
    Carboxypeptidase Y 37259-58-8, Serine proteinase 97501-93-4, Tryptase
```

RL: BAC (Biological activity or effector, except adverse); BUU (Biological

use, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (serine proteinase and topical retinoid compns. for treatment of acne and inhibition of skin aging)

57-88-5, Cholesterol, biological studies 1323-83-7, Glycerol distearate
9005-00-9, Polyoxyethylene stearyl ether 27638-00-2, Glycerol dilaurate
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic
use); BIOL (Biological study); PROC (Process); USES (Uses)

(serine proteinase and topical **retinoid** compns. for treatment of **acne** and inhibition of skin aging)

PATENT NO. KIND DATE APPLICATION NO. DATE

PI

WO 9848775 A1 19981105 WO 1998-US2618 19980206 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE,

L31 ANSWER 7 OF 18 USPATFULL

SUMM

. . . are effective in treating arthritis. See, for example, Greenwald et al., "Tetracyclines Suppress Metalloproteinase Activity in Adjuvant Arthritis and, in Combination with Flurbiprofen, Ameliorate Bone Damage," Journal of Rheumatology 19:927-938(1992); Greenwald et al., "Treatment of Destructive Arthritic Disorders with MMP Inhibitors: Potential Role of Tetracyclines in, Inhibition of Matrix Metalloproteinases:Therapeutic Potential," Annals of the New York Academy of Sciences 732: 181-198. . et al., "Potential of Tetracycline to Modify Cartilage Breakdown in Osteoarthritis," Current Opinion in Rheumatology 8: 238-247(1996); O'Dell et al., "Treatment of Early Rheumatoid Arthritis with Minocycline or Placebo," Arthritis Rheum 40:842-848(1997). The use of tetracyclines in combination with non-steroidal anti-inflammatory agents has been studied in the treatment of

SUMM

The use of tetracyclines in **combination** with non-steroidal anti-inflammatory agents has been studied in the **treatment** of inflammatory skin disorders caused by **acne** vulgaris. Wong et al., Journal of American Academy of Dermatology 1: 1076-1081 (1984), studied the **combination** of tetracycline and ibuprofen and found that tetracycline was an effective agent against **acne** vulgaris while ibuprofen was useful in reducing the resulting inflammation by inhibition of cycloxygenase. Funt et al., Journal of the. . .